

## PATENT COOPERATION TREATY

## PCT

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 02/23925		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/IL03/00018	International filing date (day/month/year) 07 January 2003 (07.01.2003)	Priority date (day/month/year)	
International Patent Classification (IPC) or national classification and IPC IPC(7): A01H 1/00, 1/02, 5/00, 5/10 ; C12N 5/04 and US Cl.: 800/260, 265, 269, 271, 274, 314; 435/427			
Applicant HAZERA GENETICS LTD.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>1</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of ___ sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand 01 June 2004 (01.06.2004)		Date of completion of this report 09 March 2005 (09.03.2005)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230		Authorized officer <i>Valerie Bell-Harris for</i> David T. Fox Telephone No. (571) 272-1600	

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/IL03/00018

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed.
- ☒ the description:  
 pages 1-34 as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_.
- ☒ the claims:  
 pages 35-50, as originally filed  
 pages NONE, as amended (together with any statement) under Article 19  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_.
- ☒ the drawings:  
 pages 1, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_.
- ☐ the sequence listing part of the description:  
 pages NONE, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_.

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. STATEMENT

Novelty (N)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Inventive Step (IS)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Industrial Applicability (IA)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO

### 2. CITATIONS AND EXPLANATIONS

Claims 1-106 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

Claims 1-5,7-10,13-22,24-27,30-39,41-44,47-56,58-61,64-73,75-79,82-91,93-96 and 100-106 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the claimed parental cotton lines or hybrids produced by their crossing.

Claims 6,11-12,23,28-29,40,45-46,57,62-63,74,80-81,92 and 97-99 lack novelty under PCT Article 33(2) as being anticipated by BURDETT, JR. (US 6,102,971 issued 15 August 2000).

Claims 6, 23, 40, 57, 74 and 92 are drawn to cotton plants which have at least one of the following properties: tolerance to suboptimal water supply, resistance to Verticillium wilt, a fiber length average not lower than 1.32 inches and at least 1.34 inches, a fiber fineness not higher than 3.9 micronaire, and yellow flowers, wherein said cotton plants had at least one ancestor which was one of the exemplified hybrids. The claims fail to specify what the other ancestor is, or how many generations of outcrosses to the non-exemplified ancestor(s) were performed. Therefore, the claims read on any cotton plant of any genotype which exhibits one or more of the claimed traits; since the traits are not unique to the exemplified cotton hybrids, and since the genetic material from the exemplified hybrids will be lost with each outcross.

BURDETT, JR. teaches a cotton plant which has tolerance to suboptimal water supply (since it is adapted to the Southwestern United States), resistance to Verticillium wilt, an average fiber length of 1.35 inches, a fiber fineness of 3.9 micronaire, and yellow flowers (see, e.g., column 16, lines 11-67).

Claims 11-12, 28-29, 45-46, 62-63, 80-81, 97 and 99 are drawn to any cotton plant which yields better than a different plant under at least the following two conditions: suboptimal water supply and Verticillium infestation. Claim 98 further specifies that the plant have a naked Pima-type seed coat.

As discussed above, BURDETT, JR. teach a drought-tolerant, Verticillium-resistant cotton plant which would out-perform ~~another cotton plant~~ under drought conditions and/or Verticillium infestation. Furthermore, BURDETT, JR. teach that their cotton plant has been selected for the naked Pima-type seed coat found in *Gossypium barbadense* (see, e.g., column 3, lines 24-48; Table 1, bridging columns 9 and 10; column 15, lines 27-30).

NEW CITATIONS

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**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

**V.1. Reasoned Statements:**

The opinion as to Novelty was positive (Yes) with respect to claims 1-5, 7-10, 13-22, 24-27, 30-39, 41-44, 47-56, 58-61, 64-73, 75-79, 82-91, 93-96, 100-106

The opinion as to Novelty was negative (No) with respect to claims 6, 11-12, 23, 28-29, 40, 45-46, 57, 62-63, 74, 80-81, 92, 97-99

The opinion as to Inventive Step was positive (Yes) with respect to claims 1-5, 7-10, 13-22, 24-27, 30-39, 41-44, 47-56, 58-61, 64-73, 75-79, 82-91, 93-96, 100-106

The opinion as to Inventive Step was negative (NO) with respect to claims 6, 11-12, 23, 28-29, 40, 45-46, 57, 62-63, 74, 80-81, 92, 97-99

The opinion as to Industrial Applicability was positive (YES) with respect to claims 1-106

The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE